

# External radio receivers series

## 1. Description

The radio receivers are intended for remote control of the doors automation. The receivers can control one (single-channel), two (two-channel), three (three-channel) or four (four-channel) devices. The presented external radio receivers series are compatible with remote-control boards of the radio control system. When receiving the command from the board the output of the receiver is activated (is closed) for 2 seconds.

## 2. Technical characteristics

	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
Quantity of control channels .....	1	2	3	4
Operating supply voltage .....	9V ...35V DC / 8V ... 26V AC			
Current consumption (not more than).....	30mA – standby mode / 70mA – output activation			
Operating frequency .....	433.92MHz			
Quantity of receivable transmitters .....	up to 300 pieces			
Relay output .....	NO (normally-open)			
Load of relay output contact .....	1A max., 24V DC / 0,5A max., 125V AC			
Case protection rating .....	IP40			
Environment temperature .....	-20°C ... +50°C			
Overall dimensions (not more than).....	78mm x 44mm x 25mm			
Length of connection cables (not less than) .....	450mm			
Weight (not more than).....	80g			

**!** *The company reserves the right to make changes in the given manual and in the product technical characteristics.*

*The content of this manual cannot be the basis for legal claims.*

## 3. Operation

**!** *The product is designed for operation in dry places and is not intended for the use in acid, salt or explosive environment.*

### 3.1. Installation

The receiver can be installed in two ways: with the help of the mounting self-stick pad (is included into the delivery set); or with the help of case lugs (Figure 1). The connection of the receiver should be performed according to Figure 2 and according to the made choice of control channels (in case of multichannel receiver). The two-core cable is intended for power connection, the five-core cable – for channels connection.

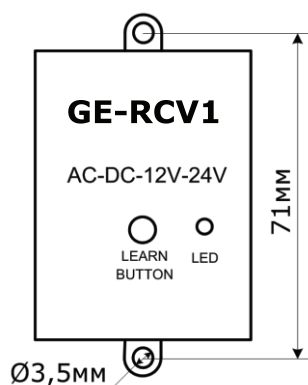


Figure 1

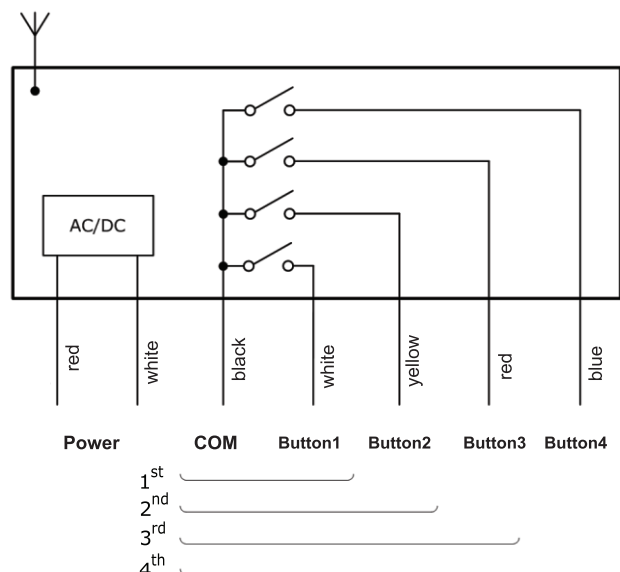


Figure 2



*The place of installation should have radio reception of high quality (there are no shielding and reflecting surfaces, other radio-frequency radiation sources).*



*Before the beginning of connection work, make sure that the wiring is de-energized.*

### 3.2 Function descriptions

- 1) Press a button of programmed transmitter, the receiver relay will be activated and connected, while it is disconnected if release the button.
- 2) The receiver supports 4 channels in maximum, each channel is controlled by the programmed transmitter buttons.

### 3.3 Programming a transmitter.

- 1) Any button of transmitter can be selected to program with any channel of receiver. Selecting receiver channel: press and hold the “LEARN” button, the LED light will start flashing, the flashing times indicates the channel numbers, that is: the light flickers one time means programming receiver channel one, flickering two times indicates to program channel two, same as the channel three and four.
- 2) Press and hold the “LEARN” button until the LED flickering times to the targeted channel, then release the button. The LED lights will be on, press the selected button of transmitter, now the LED goes out, and press the same button again, the LED light will quickly flicker 8 times and goes out, receiver then returns to standby mode, which means the programming is completed successfully.
- 3) To learn other channels or transmitters, repeat the above steps.
- 4) If using the same button of transmitter to program with several channels, the button is validly working with only the first programming channel. In the case of that one transmitter button has been programmed with a channel, and using another button of the same transmitter to learn with the same channel, then only the later programming button is valid to work with the channel, the first programming button is replaced and becomes invalid.
- 5) If the learning transmitters is already up to 300 pieces, and continue to learn new transmitters, the most previous programming transmitters will be replaced accordingly by the new ones.
- 6) To clear all of programmed transmitters: press and hold on “LEARN” button, until the LED start flickering four times and keep lighting on for 4 seconds then goes out, which indicates all programmed transmitters have been cleared successfully.

### 3.4. Functional check (test) and maintenance

Before the beginning of the receiver’s operation in doors automation check if automation performs the required commands from the recorded remote-control board (for example, opening, closing, partial opening, stop of the doors movement etc.). During testing and using watch the state of the receiver’s indicator «LED».

<b>Description</b>	<b>Indication «LED»</b>
Power is connected to the receiver. The receiver works in standby of the control command or programming procedures.	a rare blinking green
The command from the recorded board is performed (one can hear relay actuation)	is (~2sec) green
When pressing the button of the unrecorded board	is (~2sec) red
When pressing the button of the board with the lost synchronization (requires boards rerecording)	is (~2sec) orange
The receiver is faulty	is red with a short blinking

The receiver doesn’t require special maintenance. It is recommended to check (test) the work of the receiver every time when the service maintenance (support manning) of the doors automation is performed.